Cause and Consequences of Two types of Relativization

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0. Introduction

This is the byproduct of my study on word order typology and transfer grammar for English and Tamil machine translation (Rajendran & Gajeshwari 2019, Rajendran & Kumaresan 2020). Relative clause is a noun-modifying construction resulting in this generation of a higher level noun phrase. Being one of the most productive syntactic processes in natural languages, relative clause has attracted both intensive and extensive work by scholars over a long span of the history of linguistics. In the words of Stockwell (1977: 163), 'Relative clauses are one of the most extensively studied and best understood of the syntactic structures found in natural languages.' The Relative Clause Festival celebrated by the Chicago Linguistic Society in 1972 and the wide range of data and in-depth analyses reported there about relative clauses of different languages of the world (see Peranteau et al., 1972) have in a way revealed the importance of this structure in the study of language and linguistic theory. In the context of discussing the suitability of relative clause structure in studying universal grammar, Bach (1974) has mentioned three factors in its favor, which are as follows:

(i) It is relatively easy to identify relative clauses cross linguistically and they are constructions in which some form of dependent sentence is used to specify more closely the interpretation of head nominal expression;

(ii) The kinds of relative clauses encountered in the languages of the world seem to be quite limited and closely related to general characteristics of language in terms of Greenberg's typology of basic word-order; and

(iii) With apparently very few exceptions every language exhibits such structures.

These important factors make relative clause structure suitable for a theoretical contrastive study, based on word order typology.

Relative clause at the level of surface structure shows wider variations (though not unlimited variations) across languages. TG grammars have attempted to capture its commonness at the level of syntactic deep structure. A widely accepted deep structure of relative clause is represented by the phrase structure rule NP→ S NP or NP S allowing a

variation with respect to the positioning of relative clause sentence to the left or right of the head NP. This variation leads to a typology of relative clauses across languages with a two-fold classification into prenominal and post nominal relative clauses. This typology of relative clauses correlates with the typology of basic word-order of languages proposed by Greenberg (1963). By the correlation between relative clause types and word-order types, languages of SOV word-order generally prefer pronominal relative clauses and those or SVO and VSO word-orders postnominal relative clauses. Prenominal relative clauses are usually derived by deletion transformation (e.g. Tamil and Japanese) and postnominal relative clauses by movement (e.g. English and French) or pronominalization (e.g. Arabic and Hebrew). Both movement and deletion transformations are sensitive to the general constraints proposed by Ross (1967) whereas pronominalization is not.

However, there are exceptions to the above generalizations both with in a language and across languages showing their limitations as universal properties of relative clauses. Relative clause constructions modifying generic and quantified NPs are found to pose problems for the above deep structure (cf. Annamalai, 1969; Stockwell et al. 1973.). Languages like Walbiri do not seem to have relative clauses in the sense that there is no NP-embedded structure at the surface level of these languages (cf. Downing, 1978; Comrie, 1981). Persian, a SOV language with postnominal relative clauses and Mandarin Chinese, a SVO language with pronominal relative clauses are well-known cases of exceptions to the generalization correlating the typologies of relative clause and basic word-order (cf. Downing, 1978). Chinese pronominal relative clauses, moreover, make use of backward pronominalization rather than deletion transformation (cf. Maxwell, 1979). Prenominal correlative relative clauses occurring marginally in languages like Kannada and Tamil do not involve deletion and consequently they do not obey the general constraints (cf. Nadkarni, 1970; Ramasamy 1981). The constraints on movement apply only to the chopping type of movement and not to the copying type of movement, which leaves a pronominal trace. The chopping type of movement is attested in certain dialects of English (cf. Comrie, 1981). The above limitations are partly the limitations of the TG grammatical models that were available in sixties and employed in the analyses of relative clause structure during that period. It will be shown at later stages of this study that some of these limitations are rectifiable in the light of the development that have taken place within the TG framework through seventies and eighties, the summum bonum of which has been made available in the government-Binding Theory, discussed in great details in Chomsky (1981).

Due to the limitations mentioned above several studies on relative clauses, specifically the typological ones have side-tracked the TG approach and instead have based their generalizations essentially on semantic as well as surface-structure properties of relative clauses. There are three possible universal semantic properties that are closely associated with relative clauses. They are (i) co-referentiality, (ii) topic or theme and (iii) modification. These semantic aspects will be briefly dealt with in their order below.

Co-referentiality is nothing but identical specificity. Any two terms to be coreferential, they have to be at least (+ specific). All constructions involving a relative clause are characterized with coreferential NPs. An NP in the relative clause (relative NP) cross-refers to an NP in the higher level sentence (antecedent or head NP) linking in effect the clause and the sentence by co-referentiality. A relative clause is thus assigned with a cross-referring or binding role. It is essential that at least one of the two coreferential NPs is overtly expressed in relative clause constructions. The different possibilities of coreferential NPs being omitted are illustrated below with examples from English. (Brackets are used in the examples to indicate the boundaries of relative clauses. Also in the examples, the coreferential NPs are underlined).

1. The *novel* (I read ϕ) was interesting
2. I haven't found ϕ (*what* I was looking for)
3. They boy chose the *doll* (*which* cost the most)

In example 1 relative NP is omitted, in example 2 antecedent NP is omitted and in example 3. both the co-referential NPs are maintained. These different possibilities as it will be seen later on in typological studies, will lead to different strategies of relativization across languages.

Topic or theme refers to an NP about which a statement is made. A relative clause is always a statement about the relative NP and thus about its antecedent NP (cf. Schachter, 1973; Kuno, 1976). Kuno (1976) has argued with evidences from Japanese that the constraints on relativization are in fact constraints on what can serve to topic or theme. In support of this generalization, Downing (1978: 379) has recorded as follows: 'Parallels between relativization and thematization in a number of languages seem to bear out this hypothesis, and I know of no counterexamples.'

Modification is a functional semantic property by which the modifier limits the meaning of the modified. Relative clause modified an NP by limiting its scope of reference. An NP refers to a set of individuals having certain properties, and relative clause narrows the set to the subset having the property attributed by it. This is a property only of restrictive

relative clauses as opposed to non-restrictive relative clauses are illustrated in examples 4 and 5 respectively.

4. The professors who are absent minded are good

5. The Professors who are absent minded are good

Restrictive and non-restrictive relative clauses differ in making logically contradictory presuppositions. Thus, examples 4 and 5 presuppose respectively 6 and 7.

6. Some professors are absent minded

7. All professors are absent minded

6 and 7 are logically contradictory propositions. Whenever 6 is true, 7 will be false, and whenever 7 is true, 6 will be false. In terms of the referential structure of NPs, the distinction of restrictive vs non-restrictive relative clauses is 'solely a reflection of referential quantification-All or SOME' (Lytle, 1974:41). However, non-restrictive relative clauses are not as prevalent as restrictive relative clauses across languages. Some languages apparently have no non-restrictive relative clauses. In others they are syntactically quite distinct (e.g. English) and in some others restrictive and non-restrictive relative clauses are syntactically indistinguishable (e.g. Tamil) (cf. Downing, 1978).

The three semantic properties discussed above are not, however, properties exclusively of relative clauses. Co-referentiality of NPs, overlaps with syntactic processes like pronominalization and co-ordination. Topicalization is the characteristic of passive and cleft-sentence formations. Noun modification includes adjective, which do not always have their source in relative clauses. Therefore, relative clauses cannot be studied solely on the basis of their semantic properties.

1. Universal typology

Downing (1978) in his paper "Relative Clause structures" discusses in details the universal properties and tendencies of relative clause construction. His ideas observations and generalizations are discussed under this heading. This gives us a background to talk about the typology of Relativization ion English and Tamil.

Linguists tend to use the term 'relative clauses' as if it referred to a universal grammatical entity. The followings questions on relative clause have been raised: 'what are the syntactic properties of relative clauses in language x?' or 'do relative clauses in x precede or follow the head of the constructions? We need to know how a construction in some language can be identified as a relative clause.

1.1. Syntactic properties

Downing (1978: 377) lists the following as syntactic properties of relative clause (RC) constructions found in various languages:

a. A RC contains a finite verb.

b. The verb of a RC assumes a distinctive nonfinite form.

c. A RC contains a pronoun co referential with a noun that immediately precedes the RC.

d. No nominal in the RC is co referential with a preceding noun.

e. A RC together with a nominal expression forms a noun phrase (NP) constituent.

f. A RC is the sole constituent of a NP.

g. A RC. Is not a constituent of a NP?

h. A RC begins (or ends) with a distinctive marker.

i. A RC contains a marker that is linked by concurrence with a nominal marker outside the clause.

j. The internal structure of a RC is indistinguishable from that of (some) non relative clauses.

Obviously, none of these syntactic properties is universal since as universals they are inconsistent with one another. RC's in various languages do exhibit these diverse syntactic properties.

Transformational grammars provide a means of characterizing the basic oneness of variety of syntactic forms having a common meaning in a single language. This is done by positing a single basic abstract form (a class of 'deep structures') from which the various syntactic manifestations ('surface structures) can be derived by general rules. All surface forms sharing a derivation form deep structures with certain common properties can be described as syntactically of the same type. e.g. as being relative clauses.

But the deep structures posited in order to account for surface forms in various languages differ from language to language at least with respect to the positioning of relative clauses in larger structures. Attempts to justify a common deep syntactic representation for relative clauses in all languages (e.g. Bach 1965) have not escaped arbitrariness, at least with respect to ordering of elements. Not only do relative clauses precede other elements within a single NP in some languages and follow in others in some languages relative clauses do not enter into nominal constituents at all the surface level, so that there is no motivation for deriving them from an embedded position in deep structures in those languages. These facts suggest that a universal characterization of the notion, 'relative clause' can only be given in semantic terms (Downing, 1978:377).

1. 2. Semantic characterization

A relative clause never stands alone as a complete sentence; it is always linked semantically at least, to a noun phrase that is part of another clause. This linking is achieved through a semantic property of all constructions called relative clauses that has already been alluded to a relative clause incorporates, as one of its terms, a nominal which is co referential with a nominal outside of the clause. Either nominal need be expressed overtly, although presumably one or the other must.

8. The car (I saw?) was green.
9. I haven't found? (What I was looking for)
10. The girl chose the ring (which cost the most)

(Downing, 1978:378).

Sentence 8-10 illustrate various possibilities with regard to omission of the credential NP's in English.

We may refer to the relative clause as the relative NP (Rel NP) and the co-referential nominal outside the relative clause as the antecedent NP (Ant NP). In some cases, however, Rel NP may be coreferential with an entire clause, as in 11 in which case may speak of an antecedent clause.

11. They locked up all the children, which pleased their parents.

(cf. Downing, 1978:379).

A semantic property of relative clauses, noted by Gundel (1974) and emphasized by Kuno (1973, 1976:420) is that a relative clause must be statement about the Rel NP and thus about its antecedent. Kuno has supported this 'Thematic constraint" with evidence that in Japanese, a clause can be a relative clause just on case Ant NP represents as theme; furthermore, relative clauses have the form of clauses from which Rel NP as theme has been deleted. There are various constraints concerning which terms can serve as Rel NP. Such as Ross's coordinate structure constraint complex NP constraint (Ross 1967) and the Keenan-Comrie Accessibility Hierarchy (Keenan and Comrie 1972) are then, according to Kuno, constraints on what can serve as theme Parallels between relativization and thematization in a number of languages seem to bear out this hypothesis.

A third essential semantic property of RC's is the functional property of modification. This is a property of only some RC's those referred to adjectival or restrictive as opposed to non-restrictive or appositive a relative clauses. This is the property that distinguishes example 12 (restrictive) from 13 (non-restrictive).

12. The children who have green tickets will be admitted free.

13. The children, who have green tickets, will be admitted free.

(cf. Downing, 1978:379).

Restrictive relative clauses express an assertion about some individual or class, with the function not of conveying new information but of restricting the reference of Ant NP to those possible referents of which that assertion is believed to be true whereas in 6. It is stated that any and all children will be admitted free. The non–restrictive clause who have green tickets in 6 expresses an independent (though downgraded) assertion concerning the same unrestricted set of children.

The properties of non-restrictive RC's are quite different from those of restrictive RC's across languages. Some languages apparently have no non-restrictive RC's in others they are syntactically quite distinct in others restrictive and non-restrictive RC's are syntactically indistinguishable. In some languages RRC's are never incorporated syntactically into the clause containing the antecedent. Thus, we have just three universal defining properties of RC's, all semantic: Co reference between terms inside and outside the clause (Red NP and Ant NP); the notion that the RC is an assertion about Red NP (that Red NP is its theme); and the relation of modification which holds between a restrictive relative clause (RRC) and its antecedent (cf. Downing, 1978:180).

1.3. Syntactic universals

So far it has been claimed that while a universal semantic definition can be provided for the notion 'relative clause', there is no single set of syntactic properties by which RC's can be identified as a universal syntactic category. But this is not to say that there are no true universal generalizations to be made concerning the surface syntactic form of RCs. We can ask questions such as these (Downing, 1978:380-81).

(a) Do all languages have relative clauses?

(b) If there are no formal syntactic properties common to all relative clauses (for the sentence structures in which they occur) are there clearly definable language types, within which relative clauses have common syntactic properties?

(c) Can the form of relative clauses have common syntactic properties of that language?

(d) Are there in the absence of strictly universal properties, structural tendencies which may still be of interest in our attempts to understand how languages are structured?

Answers to the questions just posed may be expressed as universal statements classified into four major statement types. (cf. Fergusson 1971) (Downing, 1978:381).

(a) Absolute universals (AU):

All languages have property X.

(b) Implicational universals (IU):

If a language has property Y, it has property X.

(c) General tendencies (GT):

Most languages have property X.

(d) Implicational tendencies (IT):

If a language has property Y, It is likely to have/usually has property X.

While universals of types a and b are clearly the most interesting, strong tendencies in language structure are also of interest to the linguist in that they demand explanation and they may suggest the possibility of discovering conditioning factors in terms of which they may be restated as true implicational universals. Furthermore, typologies can be constructed on the basis of generalizations of these sorts: a language type is a class of languages of which a set of implicational universals and implicational tendencies (restated in absolute form) are true, the larger the set of statements, the more interesting is the type.

There seems to be but one absolute generalization that is justified with respect to relative clause (Downing, 1978:381):

A. All languages make use of restrictive relative clauses (AU) as semantically defined.

Present evidence suggests, however, that a number of implicational generalizations can be formulated in terms of correlations between the position of the RRC in its sentence and its internal structure, on the one hand, and between its position and the dominant word order type of the language in question on the other (Downing, 1978:382).

Prenominal – occurring in the position of S in the configuration […S…NP] NP where S is the relative clause and the included NP is the head or modified nominal (Ant NP).

Post nominal – occurring in the position of S in the configuration [NP …. S …] NP

Together, these two types in which S is adjoined to the head NP may be referred to as ad-relatives (following Andrews 1971).

Replacive – occurring in place of Ant NP with no surface manifestation of Ant NP.

Left-extraposed – occurring outside of and preceding the clause containing the modified nominal.

Together, these latter two types will be referred to as co-relatives. This latter term is to be distinguished from the term correlative (relative clause) which refers to a particular syntactic marking of some left-extra posed co-relative clauses,

1.4. Post nominal Relative clauses

1.4.1. Correlation with word- order type

The strong correlation between verb-object (VO) word order and the use of postnominal RRCs is well-known. English is basically an SVO language in which RRCs are preposed. Tamil, an SOV language, has postposed RRCs. The tendency, however, is strong enough to be worth including among over generalizations concerning relative clause formation (cf. Downing, 1978:383):

B. With few exceptions, a language has post nominal restrictive relative clauses and only if in the basic word order of the language verbs precede their objects (IT).

1.4.2. Internal RC structure in SVO languages

Schwartz (1971: 142) has provided the following classification of post nominal RRCs on the basis of

(a) presence versus absence of an introductory particle (complementizer), symbolized below by *that*

(b) presence versus absence of a clause-initial relative pronoun, symbolized by WH; and

(c) presence or absence of a (non-relative) pronoun (PRO) within the clause.

The list of languages exemplifying the above classes is (Downing, 1978:384):

i.	N [S… ϕ…)	Dyirbal
ii .	N that [S ... ϕ …]	Vietnamese, Hausa
iii .	N that [S…PRO…]	Hebrew, Arabic, Akan
iv .	N [S WH …]	Latin and derivatives
v .	N. that [S…PRO…]	Indonesian, Hungarian
vi .	N WH that [S…ϕ …]	Spoken Hebrew
vi .	N [S WH…PRO…]	Rumanian

In many languages, of course, more than one of these types is found. Modern English uses both ii and iv alternatively, but it also uses i. Just in case Rel NP is not the subject. Black English uses iii and allows i even when Rel NP is the subject, as in example 7 and 8, from Tyson (1976).

14. Now and I have one nephew that he stays with us. (Type iii)

15. Porky is the little bitty one look almost like Florrie. (Type i)

1.4.3. Initial relative particles.

In all types of post nominal RRC's other than i, a marker of some kind is present at the beginning of the clause. In types ii and iii, this is an invariant particle (often, historically at least, a demonstrative form). For example, English *that*. The same kind of particle is found in combination with a relative pronoun in types v and vi.

1.4.4. Relative pronouns

In type vi as well as in types v and vi, a special prenominal form of Rel NP appears in clause-initial position. This relative pronoun is commonly either identical with interrogative pronouns or a demonstrative form. For example, English *which*, *who*.

1.4.5. Pronoun retention

When there is no initial relative pronoun (and even, in rare cases, when there is) Rel NP may either be deleted or retained in a non-initial position. However, a proform of Rel NP in non-initial position always has a non-distinctive weak pronominal form and is positioned where such a pronoun would appear in a simple declarative sentence i.e., there is no movement assignable to relativization. Many languages delete Rel NP in some positions and retain a proform in other positions, obligatorily or optionally (cf. Downing, 1978:385). In some SVO languages, post nominal RRC's are also marked in some additional way, but these markers are in most cases applicable to other subordinate clauses as well.

1.4.6. No connective

Post nominal RRCs of type i are the least common. They are used in Standard English, but only if Rel NP is not the subject and only as an alternative to type ii and iv. However, that in Black English dialect type i clauses are possible even with the deletion of a relative NP which is the subject of the clause.

Relativization by marking the verb seems to be the exception for post nominal RRCs in SVO languages but is found commonly in other RRC types. There are two additional cases in which postnominal RRCs in SVO languages are regularly marked by means of Rel NP deletion plus verb marking. In cases of object relativization the subject, prefix on the verb prevents ambiguity. But if Rel NP is the subject then only the suffix particle would prevent the verb from being interpreted as the main verb when the head is subject of its clauses (cf. Downing, 1978:387).

1.4.7. Transformational processes and permitted combinations

The common properties of postnominal RRC's in SOV languages can be described in transformational terms as the result of the application or non-application of three largely independent processes of relativization (cf. Downing, 1978:388):

(a) Insertion of an initial relative particle,

(b) Copying of Rel NP is a relative pronoun form (sometimes as part of an NP that contains it) in clause-initial position,

(c) Deletion of Rel NP.

It can be assumed that the assignment of an unstressed anaphoric form to Rel NP, and in some languages its deletion, follow from general principles of pronominaliztion, which are not part of the relativization process. The seven types of postnominal RRCs listed above result, then, from the application of the following combinations of the rules just given (Downing, 1978:388).

i. c only (accompanied by verb marking in languages that exhibit no other type)

ii. a and c

iii. a only

iv. b and c

v. b > a,c

vi. a > b,c

vii. b only

Thus, of the logically possible combinations of these three processes, only two are not found; there are no SVO languages which use none of these relativization processes, and there are none of the form (Downing, 1978:388).

viii. NP that WH …PRO…

(or) NP WH that …PRO…

The least common type, (i) is the one which uses neither of the devices that serve to separate the relative clause from the immediately preceding antecedent, but even in type (i) there is a tendency to use distinctive verb marking and to position the verb at the beginning of its clause (cf. Downing, 1978:388).

1.4.8. Internal relative clause structure in verb-initial languages

In a strict verb-initial language there can be no initial nonverbal relative marker, a verb-initial language nevertheless may allow particles and even pronouns to precede the verb. It appears that the type i relatives are most common in verb-initial languages with at least one other type vi possible whereas i is least common in SVO languages. This difference can perhaps be explained on the basis of perceptual ambiguity: in SVO languages a verb in an

unmarked RRC modifying the subject could be misinterpreted as the predicate of the main clause, but not in a VSO language, where initial position clearly identifies the main verb. *(compare the man O robbed the bank*) *escaped with the escaped man (robbed the bank).*

1.4.9. Postnominal relative clauses in verb final languages

Postnominal RRCs are rare in verb-final languages. SOV languages uses post nominal as well as correlative and extra posed RCs. In Persian, when RRCs are postnominal, all of these relativization processes of SVO languages may be used even if the basic word order is SOV. the man-REL OBJ-PART saw-you the man whom you saw.

1.5. Prenominal relative clauses

1.5.1. Correlation with word-order type

The well-known correlation between verb-final word order and pre-positioning of relative clauses and other modifiers are illustrated using different languages by Downing (1978). The generalization can be stated as follows (cf. Downing, 1978:391):

N. With few exceptions, RRCs are not postnominal if in the basic word order of the language verb precedes their objects.

O. with exceptions, RRCs are pronominal only if in the basic word order of the language verbs follow their objects.

1.5.2. Prenominal relative participle

1.6. Replacive Relative clauses

In all the cases surveyed thus far, Ant NP is essentially unaffected by relativization, while Rel NP is obligatorily either pronominalized or deleted. Many languages allow the head of an ad-relative clause to be omitted when it has no specific semantic content (e.g. such heads as that and something in English). In English the headless relative clause is fully grammatical only with an inanimate subject or object Rel NP and only with the special relative pronoun form what (ever) (Downing, 1978: 397).

16. Something that John said annoyed her.
17. That which John said annoyed her.
18. *That John said annoyed her.
19. * Which John said annoyed her.
20. What John said annoyed her.
21. What goes up must come down.
22. *Who borrowed my pen didn't bring it back.
23. I don't like who you meet there.
24. *Where we met was beautiful.

25. *I don't like when the class starts.

There are no languages with post nominal RRC's that allow the head to be deleted or pronominalized while Rel NP is retained as a full lexical NP. There are also no SVO languages that exhibit such constructions. Some verb-final languages, however, allow Ant NP on a preceding RC is retained in its full lexical forms. The RC cannot be classified as either prenominal or post nominal. The essential form is

(xiii) [NP [s……Rel NP….V]]

1.7. Correlative relative constructions

Except for the arguably interrogative pronoun *mi'n* in Bambra, the data so far have supported the generalization that relative pronouns, and in particular pronouns of interrogative form, are found only in postnominal RC's. It is also the case that the three types of relativization discussed so far, the relative clause has preceded or followed or replaced Ant NP within a NP constituent.

In the so-called correlative structure, the RC precedes the entire clause containing the modifier NP. In the typical case, neither Rel NP nor Ant NP is deleted; rather they are both marked by correlative morphemes. These are typically an interrogative pronoun or adjective attached to Rel NP and a demonstrative attached to Ant NP. Schwartz (1971) represents this arrangement in his classification of RC types as follows (Downing, 1978: 399).

xiv [S…WH…] TH (N)…

It is possible for nominal head in one clause or the other (or both if nonspecific) to be omitted, and some language permit deletion of the entire Ant NP under some circumstances, giving the form shown above.

xv. […WH…] …?…

Many language permit a correlative structure to be used when the reference to the coreferential NP's is nonspecific, i.e., in just those cases where most languages seem to allow replacive RC's. English, for example, has sentences such as those in 26 and 27, where b and c cases are derivable from the case by general principles of topicalization. (Downing, 1978: 399).

26. a. She gets whatever she asks for.
    b. Whatever she asks for she gets. (type xv)
    c. Whatever she asks for, that she gets. (type xiv)

27. a. We liked what we saw.
    b. What we saw, that we liked.
    c. What we saw, that we liked.

Indefinitives with lexical heads also seem to be generally tolerated in English.

28. a. She gets whatever toy she asks for.
    b. Whatever toy she asks for she gets.
    c. Whatever toy she asks for, that she gets.

But the construction with a definite lexical head is not permitted in many languages, including English (29).

29. a. *We liked what movie we saw.
    b. *What movie we saw, we liked.
    c. *What movie we saw, that we liked.

2. Relative clause in English and Tamil

A contrastive analysis of relative clauses in Tamil English has been studied extensively by Ramasamy (1988). He has studied relative clauses of English and Tamil in typological and TG perspectives. The present study makes use of his observations and arguments.

Here we are chiefly concerned with the relative clauses of English and Tamil from the point of view of word order typology. Relative Clauses in English and Tamil have been studied both intensively and extensively in the light of the Downing's (1978) and other investigations on "Relative Clause Structure".

English relative clauses with respect to their form, position and distribution have been traditionally studied by Jespersen (1927) followed by Curme (1931). Almost all generative grammarians who have studied English syntax have also studied relative clauses (to mention only a few, Smith, 1964; Chomsky, 1965 and 1968; Ross, 1967: Karttunen, 1968; Kuroda 1969: Lakoff, 1970; Postal, 1971; Thompson, 1971). All these studies have controversially approached the problems pertaining to the deep structure, transformational derivation and constraints of English relative clause formation. Several such studies have been critically reviewed in Stockwell, et al. (1973). The syntactic issues pertaining to English relative clauses have taken a different dimension after the advent of X bar syntax and modular theories of Government and Binding (cf. Chomsky, 1977 and 1981; Jackendoff, 1977; Bresnan and Grimshaw, 1978; Riemsdijk and Williams, 1986).

Due importance has been given in Tamil to the study of relative clauses through a continuous history of more than 2000 years of Tamil grammatical tradition. Relative clause in Tamil is denoted by a non-finite form of verb, where the relative participle marker *a* is affixed after past and present tense markers with a ϕ variant for future tense (*eg. paaTi-tt-a,*

paTi-kkiR-a and paTi-kkum-ϕ, the verb root paTi meaning 'read'). The relative participle, which is always followed by a noun, has been named *peyarencukilLavi* by Tolkaappiyar (300 B.C.) and *peyareccam* by Pavananti (1300 A.D), both the terms meaning 'noun expectant'. Tolkaappiyar (300 B.C.) has insightfully listed nouns in six casal relationships (place, object, time, instrument, subject and action) as relativizable, omitting nouns of two casal relationships (purposive and resultive) as nonrelativizable. The commentators of Tolkaappiyam (Tolkaappiyar, 300 B.C) and Nannuul (Pavannanti, 1300 A.D) have debated at great length nouns of what casal relationships are relativizable and what are non-relativizable. Certain issues pertaining to the form and distribution of Tamil relative participles (or clauses) have been touched upon by the Missionary grammarians (cf. Caldwell, 1856; Pope, 1885 Arden, 1942). A taxonomic approach to the study of relative participles been tried with no obvious advantage by Zvelebil (1957, 1958 and 1962). Analysis of Tamil relative clauses through TG grammar for the first time has been started by Agesthialingom (1967) using the framework of Chomsky's syntactic structures (Chomsky, 1957). All these studies beginning from Tolkaapiyar (300 B.C) to Agesthialingom (1967) have been critically examined and their inadequacies pointed out by Annamalai (1969) from a post Aspects of TG perspective. The Ph.D. dissertation on 'Adjectival clauses in Tamil' by Annamalai (1969) is a milestone in the study of Tamil relative clauses. In this study, relative clauses have been differentiated from the complement adjectival clauses, and the various constraints pertaining to relative clause formation have been extensively studied.

Contrastive study of Tamil and English relative clauses has been undertaken rigorously by Ramasamy (1988). He has studied it from both typological and transformational grammar (TG) perspectives. Here in this chapter mostly typological perspective is taken up which is the concern of this research work. Salient features on TG perspectives are also discussed here. From a typological perspective, a contrastive analysis of syntactic constructions like relative clauses between English, an SVO language with rigid word order and Tamil, a SOV language with a relatively flexible word order is likely to contribute to the study of linguistic universals and language typology. In contrastive studies usually, individual languages will be described in a uniform theoretical framework followed by comparisons by way of pointing our similarities and differences. With regard to the study of relative clauses between English and Tamil, it is felt that separate descriptions for the two languages would be a repetition since such descriptions already exist in one form or another in both the languages. So is the case with just listing similarities and differences between Tamil and English relative clauses. From the studies available on English and Tamil relative

clauses one could cull out the similarities and differences between relative clauses of both the languages without difficulty. As for instance, one could easily show that the deep structure of Tamil relative clause is NP → S NP whereas it is NP → NP S for English, movement applies to English relative clauses while deletion applies to Tamil relative clauses, and so on. Such statements are dispensed with in this typological study. The purpose of this theoretical contrastive analysis is, however, to see how English and Tamil relative clauses behave alike or differently in both typological and generative grammar perspectives.

Based on the discussions made above the following types of relative clause structures can be listed for English and Tamil. This list reveals the difference between the relative clause structures of English form the point of view of typology.

I. Prenominal relative clause.

Internal structure: Tamil

30. [*ndaan vaangk-iya-*] *peena azhakaan-atu*

I buy_PAS_RPM pen beautiful_it

'The pen I bought was beautiful.'

II. Postnominal Relative Clause (cf. Downing, 1978)

Internal Structures: English

i. N [S…?…]

ii. N that [S…?…]

iii. N that [S…PRO…]

iv. N [S WH……]

v. N [S WH…PRO]

31. The girl [I met ? yesterday] left this evening.

32. The girl that [[I met ? yesterday] left this evening.

33. Now and I have one nephew that [he stays with us]

(Black English, Downing, 1978:284)

34. The girl [whom I met yesterday] left this evening.

35. This is the road [which I don't know where it leads]

(Non-standard English, Comrie 1981:133)

III. Replacive Relative Clause

Internal structure: Tamil:

[NP[S…participial noun]]

36. [*veelai-kkup poo-n-a-van*] *innum var-av-illai*

work_DAT go_PAS_RP_he yet come_INF_not

'One who went to work has not yet come back'

Internal structure: English:

[NP[S WH…]

37. [What goes up] must come down.

(Downing,1978:397)

IV. Left- extraposed Relative Clause

Internal structure: English

i. [S…WH(N)] TH…

ii. [S…WH(N)] … ?…

38. [Whatever [toy] she asks for] that she gets.

39. [Whatever [toy] she asks for] she gets.

(Downing, 1978:400)

Internal Structures: Tamil

iii. [S WH(N)…V_INDEF.CLIT] TH(N)…

iv. [S WH(N)…V_COND. CONCESS] TH(N)…

v. [S …(Rel NP…V_TAG] TH(N)…

40. [*ramyaa* [*endtap puttakatt-ai /et-ai] keeTTaaLoo*] [*andta puttakatt-ai /at-ai*] *ndaan koTutteen*.

Ramya [which book_ACC] ask_ PAS_she_INDEF.CL [that book_ACC] I gave.

'I gave [the book] that Ramya asked'.

41. *ramyaa* [*endtap puttkatt-ai/* et-ai] *keeT-T-aalum* [*anta puttakatt-ai/ at-ai*] *ndaan koTu- p-een*.

Ramya [which book_ACC/which_ACC] ask_PAS_COND.CONCESS [that book_ACC/ that_ACC I give_FUT_I

I shall give [whatever book/ whichever] Ramya asks

42. [*pooTTiyil* [*oru peN*] *mutalil va-ndt-aaL–ee/allavaa*] *andtap peN/avaL en makaL*

Competition one girl first come_PAS_she_TAG that girl/she my daughter

'The girl who came first in the competition is my daughter'

V. Right extraposed Relative Clause

43. The man came back [who you said had been trying to see you about helping his find a home for his cat]. (Downing, 1978:405)

44. *raamu* [*veelai-kkup poo-n-avan*] *innum varavillai*.

Ramu work_DAT go_PAS_RP_he yet come-INF-not.

'Ramu who went to work has not yet 'come back'

The most prevalent and also the core correlative clause construction in Tamil is represented in the example (30). It is the characteristic of pronominal relatives of SVO languages. The relative NP is deleted along with its case (and postpositions) and the relative marker is suffixed to the verb in the relative clause. Tamil follow essentially the above properties with slight formal variations in relative marking. In Tamil, the verb in the relative clause becomes non-finite after suffixing the relative marker.

In English, almost all possible structural types of postnominal relative clauses are found. The most common relative clause construction in English is represented by type ii as exemplified in (34). In this type the relative NP is converted into a special pronominal form called relative pronoun (WH) and moved to the clause initial position.

The relative clause types involving a relative particle involve relative particle insertion and relative NP deletion or pro nominalization. In English, these are used as alternative to the ones involving relative pronoun. Relative particle replaces the relative pronoun, a common transformational process for all types of postnominal relative clauses. The verb in all types of post nominal relative clauses is generally found to be finite.

In Tamil, the head NP in one of its pronominal forms is attached to the relative particle and the relative NP is deleted (cf. example 36). The replacive relative clause in Tamil is found to share all its syntactic properties with its prenominal counterpart (cf. Agesthialingom, 1967; Annamalai 1972), but for the absence of an independent lexical head NP in the surface structure. In traditional linguistic analysis the structure V-TENSE-RPM-pro has been always recognized as a word and a grammatical category called as participial noun.

In English, the replacive clause has been variously called 'substantive relative' (Curme, 1931), 'primary relative' (Jespersen 1927), 'headless relative' (Andrews 1975) and 'head free or free relative' (Bresnan & Grimshaw, 1978). Special relative pronouns like *what* and *whatever* are made us of and these are analyzed with indefinite heads as something which and anything which respectively. The replacive clause in English, just like Tamil, shares many of its syntactic properties with its postnominal counterpart (cf. Bresnan & Grimshaw, 1978). In all languages where the replacive relative clause is found to occur, it remains only as an alternative to the corresponding ad-relatives. This makes one to question whether the replacive relative should be treated as an independent type of relative clause at all.

Co-relatives have been classified into left extraposed and right-extraposed relative clauses by Downing (1978) only with respect to their positions in the surface structure. The

term ‘extrapsed’ does not refer to the transformational process, although it is true even in this sense for English co-relatives. Co-relatives is distinctive from other types of relative clause in retaining both the head NP and the relative NP at least in their pronominal forms. The left extraposed co-relative of type IV i in English is illustrated by example (38). Both the head NP and the relative NP are retained in their pronominal forms. The lexical head is optionally retained after the indefinite relative pronoun. In type IV ii with the example (39) the pronominal form that is however is deleted. In English, left extraposed co-relatives are possible only with indefinite co-referential NPs. They are derivable from the corresponding replacive relatives through the principles of topicalization. For instance, examples 38 and 39 can be derived from the sentence; she gets (whatever (toy) she asks for, which represents a replacive relative clause in English.

Downing (1978:400) has generalized that “If a language has correlative relative clause constructions, it does not have prenominal ad-relative clauses”. In contradiction to this generalization, Tamil a SOV language with prenominal ad-relative clauses occurring predominantly makes use of the correlative relative clauses marginally. Example (40) illustrates the correlative clauses (type IV iii) in Tamil. Interrogative adjective precedes the relative NP and the remote demonstrative adjective the head NP. When the coreferential NPs are indefinite, the adjectival forms may be replaced by their respective pronominal forms. The finite verb of the relative clause is specially suffixed with an indefinite clitic *-oo.* In an essentially conditional concessive meaning, type IV iv correlative relative clause is used (cf. example 41). In this construction, the occurrence of head NP along with its prefixing demonstrative adjective is optional and the past tense verb of the relative clause is suffixed with the conditional concessive morpheme *-aalum*. In Tamil, there is also a third type of left-extraposed co-relative construction (cf. IV v example 42) distinct from the two types of correlative relative clauses described above. In this type of co-relative, the relative NP is preceded by an indefinite quantifier and the head NP by the remote demonstrative adjective. The occurrence of relative NP along with its preceding indefinite quantifier is optional. The finite verb of the relative clause is suffixed with the tag morpheme *-ee* (in both spoken and written Tamil) or followed by the particle *allavaa* (in written Tamil). Lakshmi Bai (1983) who calls this co-relative type as affixal relative clause (following, of course, Annamalai (1969)), has recorded that in child language acquisition this type of relative clause emerges earlier to the prenominal and correlative types. The functional value of the left extraposed co-relative constructions is that they can occur even in contexts where the prenominal and

replacive relatives cannot. The co-relatives do not obey the general constraints which the prenominal and replacive relatives do (cf. Annamalai, 1969 & 1972 & Ramasamy, 1981).

The right-extraposed relative clause is not a distinctive type as such. It has no internal structure of its own as has been already mentioned. The right-extraposed relative clause in English is illustrated in the example (43). The relative clause is essentially the postnominal one (type iv). It takes a position after the main clause instead of taking a position immediately after the head NP. How far it can be away from the head NP depends on the length of the intervening material and the possibility of ambiguity in identifying the head NP (cf. Downing, 1978). In Tamil, as shown by the example (44), the replacive relative clause takes a position to the right of the head NP. Annamalai (1972) has explained that such constructions are the result of the prenominal relative clause being flipped after the head NP and nominalized just as the numeral and quantifier adjective (*e.g. oru paiyan* > *paiyan oruttan 'a boy'*). The right extraposed relative in Tamil (example 45) is thus derived from prenominal relative (example 46) as illustrated below:

45. [*cennai-kkup poo-n-a peN] innum tirump-av-illai*
    Chennai_DAT go_PAS_RPM girl yet come back_INF_not

Flipping nominalization:

46. *andtap peN* [*cennai-kkup poo-n-aaL*]. *innum tirump-av-illai*
    that girl Chennai_DAT go_PAT_she yet return-not
    'The girl who went to Chennai has not yet come back'

The above discussion on positional and structural typology of relative clauses shows in essence that pre-nominal relative is the most basic type for SOV languages and postnominal relative for SOV and VSO languages, with a few exceptions. The replacive relatives and right-extraposed co-relatives are derivatives of either of the above. Correlative relative clauses (left-extraposed co-relatives) are most prominent in SOV languages with no pronominal relatives although they are marginally used in SOV languages with pronominal relatives as a functional alternative. Prenominal relatives are formed out of deleting the relative NP and adding a relative marker to the verb of the relative clause. Postnominal relatives are the result of WH-movement (chopping or copying) in SVO languages. In VSO languages postnominal relatives are formed out of deletion or pronominalization of relative NP and insertion of a relative particle. In correlative relative clauses both the head NP and the relative NP are normally retained in their full lexical forms with their case and postpositional markings.

Downing (1978:411) summarizes his findings as follows. In all languages some clauses function to restrict the reference of a nominal in another clause. In some cases the modifying (restrictive relative) clause is positioned before or after the clause containing the modified nominal and may be syntactically indistinguishable from other semantically subordinate clauses in the same position. If the relative clause precedes the coreferential NP's in the two clauses they are frequently marked by correlative morphemes. Languages that use correlative constructions of this sort have OV word-order and may also have relative clauses that replace or follow the modified nominal other OV languages, especially third of consistent OV typology, usually have pronominal relative clauses, typically marked by a relative suffix on the verb and by deletion of Rel NP, but Ant NP may be deleted instead of Rel NP, so that the relative clause in effect replaces the head nominal.

In VO languages relative clauses usually follow ant NP in an embedded position or are extra posed to the right. Relativization involves pronomilization or deletion of Rel NP, and especially in SVO languages, a clause – initial connective particle or relative pronoun. If no relative marker appears in initial position in the clause, then either the subject or the verb is in initial position, if the verb is initial it usually bears a relative marker.

The present form of generalizations serves as a summary of observations on the nature of relative clauses across languages, with which the data of additional languages may be compared. As such generalizations are made as they afford an increasingly solid empirical basis for the formulation of explanatory principle in functional and psychological terms.

3. Summary

In their studies on relative clauses (RCs), Keenan and Comrie (1977) and Downing (1977, 1978) identify certain syntactic features which they consider to be universal features of relative clause structures. From the typological point of view English and Tamil show two types of relative clause structures. English relies on the relative pronoun to form relative clause whereas Tamil relies on modifying the verb of the embedded clause into an adjectival or relativized form by adjectival marker or relativizer.

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